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10/728,331	12/04/2003	Theodore E. Anvick		7370

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Forrest Ryan Chadwick
11776 W. Pico Blvd.
Los Angeles, CA 90064

EXAMINER

CAJILIG, CHRISTINE T

ART UNIT	PAPER NUMBER
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3637

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,331

Applicant(s)

ANVICK ET AL.

Examiner

Christine T. Cajilig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/04/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

A listing of registered patent attorneys and agents is available on the USPTO Internet web site <http://www.uspto.gov> in the Site Index under "Attorney and Agent Roster." Applicants may also obtain a list of registered patent attorneys and agents located in their area by writing to the Mail Stop OED, Director of the U. S. Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Oath/Declaration

A new oath or declaration is required because it does not make reference to the correct application number; furthermore, the correction in the mailing address for Theodore Anvick is unacceptable. The wording of an oath or declaration cannot be amended. If the wording is not correct or if all of the required affirmations have not been made or if it has not been properly subscribed to, a new oath or declaration is required. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "18" and "8" have both been used to designate the cord of a truss as shown in Figure 5A. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "8" has been used to designate both the cord of the truss and the cross reinforcement element as shown in Figures 3J, 3K, 3L, 4B, and 5A. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 8e and 8f. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Figure 1H (as noted in the last line of page 8) and Figure 1D (as noted in lines 8,9, and 12 of page 8); no such Figures are found in the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: "chord" is misspelled in the fourth line of the first paragraph of page 7; "arenformed" is misspelled in the last line of page 8; "interinterconnection" is misspelled in the first line of page 9; "foudation" and "reinforcment" are misspelled in lines 8 and 18 of page 11.

Appropriate correction is required.

The disclosure is objected to because of the following: The content of the specification does not contain a brief summary of the invention. See item (b) below. A separate heading must be added.

Appropriate correction is required.

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject

matter of the claimed invention. This item may also be titled "Technical Field."

- (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Objections

Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The language “provides means for ductile connection of reinforcements” is functional language, which does not further limit the subject matter of claim 1.

Claims 2-19 are objected to because of the following informalities: The phrase in the preamble of the claims, “aperture device and method of claim 1” is improper. The applicant is reminded that statutory classes of inventions, i.e. a device and a method, cannot be contained within the same claim. The Examiner refers the applicant to MPEP §§608.01(i) – (o) for proper claim language and format. Appropriate correction is required.

Claim 10 is objected to because of the following informalities: The word “chord” is misspelled on the first line of page 17.

Claim 11 is objected to because items a – b contain the phrase “The connecting aperture device and method of claim1” when the preamble of claim 11 already states “The connecting aperture device and method of claim 1” in the first line of the claim. If the Applicant intends for items a-b of claim 11 to be dependent from claim 1, items a-b should be numbered as separate claims and should not be contained within claim 11. Proper correction is required.

Claim 12 is objected to because of the following informalities: The word “chord” is misspelled on the fourth line of claim 12 on page 18.

Claim 17 is objected to because of the following informalities: The word “chord” is misspelled on line 5 of page 20 and the word “and” in between “said web element” and “is rigidly affixed to one or more chord elements” in line 4 of the claim is a misplaced word.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 14 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under

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35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5, 7 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 5 states that the specifications of the device “can be tailored as to longitudinal truss elements...as to design, size...and manufacture as required by any particular engineering demands.” The specification does not contain any reference to the specification of the device and to what it can be tailored to.

Claim 7 states that an element of the aperture device is to be made of “material of the group consisting of mineral, metal, fiber, or chemical.” The specification does not provide exemplary materials from which the aperture device can be made. The only reference to materials disclosed in the application is regarding prior building structures in general in the second line of page 3 and prior art building panels in the last paragraph of page 3.

Claim 13 states that "structural elements of the family of wood, steel, or other materials...can be fitted to act as a cord elements and become incorporated into the composite structure." The specification does not provide exemplary materials from which the cord elements can be made. The only reference to materials disclosed in the application is regarding prior building structures in general in the second line of page 3 and prior art building panels in the last paragraph of page 3.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

Regarding claim 1, it is unclear as to what "a predetermined disposition of reinforcing members" pertains to. Does the predetermined disposition members further define the device claimed? For purposes of examination, the examiner interprets the predetermined disposition of reinforcing members to further comprise the device. The Applicant must be specific on what is being claimed. "A device" is vague and indefinite.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the cord and the web together form the aperture or the loop. The cooperative relationship of the cord and the web together forming the aperture or the loop is essential because the aperture or the loop cannot be defined by any one of the cord or the web alone.

Moreover, claim 2 recites the limitation "the area" in the last line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 is indefinite because it is unclear as to what "one or more reinforcement elements" or "reinforcement" refers to. Are the "reinforcing members" as stated in line 3 of claim 1, the "reinforcement elements" in line 3 of claim 4, and the "reinforcements" in line 3 of claim 4 all different limitations of the device?

Moreover, claim 4 recites the limitation "an aperture" in the second line of the claim. It is unclear whether this aperture is different from an aperture recited in the second line of claim 1 or if it is the same aperture as in claim 1.

Furthermore, claim 4 is indefinite because it is unclear how the limitation of "a framework" in the last line of claim 4 further defines the "aperture device" which is the invention nor does claim 1 upon which claim 4 is dependent makes no mention that the aperture device is defined by a framework.

Claim 5 is indefinite because it is not clear what is meant by the language "...can be tailored as to longitudinal truss elements...as to design...as required by any particular engineered demands." With the language of claim 5, there does not appear

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to be any positively recited elements added to the invention, as the language is best understood as the possible use of the invention.

Claim 6 is indefinite because it further defines the limitations of a truss and not the device. Claim 1 upon which claim 6 depends does not state that a truss defines the aperture nor does it state that the device is a truss.

Claim 7 is indefinite because it is unclear whether the "reinforcement elements" in claim 7 differ from the "reinforcing members" in line 3 of claim 1. For purposes of examination, the examiner interprets the reinforcement elements to be the same limitation as the reinforcing members of claim 1.

Moreover, claim 7 is indefinite because it is unclear as to what "at least one element" refers to. It is unclear as to what limitation of the invention is being claimed in reference to "at least one element."

Claim 8 recites the limitation "the reinforcement" in the third line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Moreover, claim 8 recites the limitation "the reinforcement matrix" in the fourth line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 is indefinite because the entire claim defines a truss system and it is unclear how a truss system further defines the aperture device. Claim 1 upon which claim 10 depends does not disclose a truss system as being part of the aperture device.

Moreover, claim 10 recites the limitations "said insulation core modules" in line 10 of claim 10, "said cementations" in line 13 of claim 10, "said cores" in line 13 of claim 10, "the truss webbing" in line 14 of claim 10, "said appositional cord elements" in lines 15-14 of claim 10. There is insufficient antecedent basis for these limitations in the claim.

Claim 11 is indefinite because it is unclear how apertures can further comprise web and chord elements as stated in the second line of the claim.

Moreover, claim 11 is indefinite because items a-g defines a truss or a truss system and does not define the invented device. Claim 1 upon which claim 11 depends does not state that a truss defines the aperture nor does it state that the device is a truss.

Furthermore, claim 11 recites the limitation "said apertures" in line 2 of claim 11. There is insufficient antecedent basis for this limitation in the claim. This further renders the claim to be indefinite because claim 1 states that the device is comprised of "an aperture" in the singular and now claim 11 discloses the apertures in the plural form.

In addition, claim 11 recites the limitations "the predetermined disposition of web vertex and cord elements" in lines 2-3 of the claim, "the web" in line 4 of the claim, "a truss structure" in line 2 of item "b", "the resulting three dimensional space frame" in line 5 of item "b", "the resulting system" in lines 6-7 of item "b", "said curvilinear and or waveform webbing" in line 2 of item "c", "the bases" in line 4 of item "d", "the cincturing vertices in lines 5-6 of item "d", "the alternating intersecting planes" in line 1 of item "f", "the summit vertex" in line 4 of item "g", and "the substantially planar opposite surface lattices" in lines 5-6 of item "g". There is insufficient antecedent basis for these limitations in the claim.

Claim 12 is indefinite because it further defines the limitations of a truss and not the device. Claim 1 upon which claim 12 depends does not state that a truss defines the aperture nor does it state that the device is a truss.

Moreover, claim 12 recites the limitations “the web vertices” in line 3 of claim 12 and “said lattice” in line 4 of claim 12. There is insufficient antecedent basis for these limitations in the claim.

Claim 13 recites the limitations “the family” in line 2 of claim. There is insufficient antecedent basis for these limitations in the claim.

Claim 14 is indefinite because it defines an aperture-equipped truss. Claim 1 upon which claim 14 depends does not state that a truss defines the aperture nor does it state that the device is a truss.

Claim 14 provides for the use of an aperture equipped truss, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 15 is indefinite because it defines the method of installing a lateral cross member reinforcement after welded wire mesh. It is unclear how the installation of a lateral cross member reinforcement after welded wire mesh defines a method of using the device.

Moreover, claim 15 is indefinite because it is unclear if the “lateral cross member reinforcement” is the same or different limitation from the “reinforcing members” of claim 1.

Furthermore, claim 15 recites the limitations “the group” in line 3 of the claim and “said aperture” in line 4 of the claim. There is insufficient antecedent basis for these limitations in the claim.

Claim 16 is indefinite because it further defines lattice elements. It is unclear how the lattice elements further define the device of claim 1. Claim 1 upon which claim 16 depends does not state that lattice elements define the aperture nor does it state that the device is a lattice.

Furthermore, claim 16 recites the limitations "said lattice elements" in lines 1-2 of the claim, "said pre spaced cinctures" in line 2 of the claim, "web face" in line 3 of the claim, "the framework" in line 5 of the claim, and "the cementation" in line 5 of the claim. There is insufficient antecedent basis for these limitations in the claim.

Claim 17 recites the limitations "said web element" in line 2 of the claim and "said elongated lattice framework" in line 9 of the claim. There is insufficient antecedent basis for these limitations in the claim.

Furthermore, claim 17 is indefinite because of the use of "and or" in lines 3-4 of the claim. It is unclear if the web element is affixed to the at least to cords by sandwiching, weaving, folding, and bending or by sandwiching, weaving, folding, or bending, or by any combination thereof.

Claim 19 is indefinite because it further defines a modular component composite panel system. It is unclear how panel system further defines the device of claim 1. Claim 1 upon which claim 19 depends does not state that a panel system defines the aperture nor does it state that the device is a panel system.

As to claims 4, 6, 10-12, 14-16, and 19 the Examiner is unable to determine patentability over the prior art as the metes and bounds of the claim language cannot be ascertained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7-9, 13, and 17-18 as best understood are rejected under 35 U.S.C. 102(b) as anticipated by Durand (U.S. Patent No. 6,691,486 B1).

Regarding claim 1, Durand in Figures 4 and 6 discloses a static structural reinforcement connecting element device (d) comprised of an aperture (a); a predetermined disposition of reinforcing members (c, f, 4, 5) providing means to attain higher ductility, and composite action in structures. The phrase “providing means to attain higher ductility, and composite action in structures” is regarded to as functional language, and while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Examiner refers Applicant to MPEP §2114. Furthermore, Durand’s reinforcing members are capable of performing the functions stated above.

Regarding claim 2, Durand in Figures 4 and 6 discloses an aperture device (d) wherein said aperture device (d) is comprised of any arrangement of elements of a truss (2) when at least one continuous web element (4, 5) is formed to a curvilinear waveform providing means for containment or girding of reinforcement (b) within the area bonded by one or more truss elements (4, 5, c).

Regarding claim 3, Durand in Figures 4 and 6 discloses an aperture device wherein said aperture device (d) provides means for ductile connection of reinforcement. The phrase "provides means for ductile connection of reinforcement" is regarded to as functional language, and while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Examiner refers Applicant to MPEP §2114. Furthermore, Durand's aperture is capable of performing the functions stated above.

Regarding claim 5, Durand in Figures 4 and 6 discloses an aperture device wherein specifications can be tailored as to longitudinal truss elements, lateral cross elements, freely locatable reinforcement apertures, insulation cores, transverse spanning reinforcements, and cementation components as to design, size, spacing, materials, methodology, and manufacture as required by any particular engineered demands to provide means for strength and versatility use. The language of this claim is best understood as to possible use, therefore, the aperture device of Durand anticipates this claim.

Regarding claim 8, Durand in Figures 4 and 6 discloses an aperture device (d) wherein the device (d) is disposed in a plurality along transverse face of a truss (2) providing a means where the reinforcement transfers forces through the reinforcement matrix in both tension and compression. The phrase "providing a means where the reinforcement transfers forces through the reinforcement matrix in both tension and compression" is regarded to as functional language, and while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must

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be distinguished from the prior art in terms of structure rather than function. Examiner refers Applicant to MPEP §2114. Furthermore, Durand's plurality of aperture device is capable of performing the functions stated above.

Regarding claim 9, Durand in Figures 4 and 6 discloses an aperture device (d) wherein the aperture (a) is formed by the innermost cross-sectional face of a web vertex (e) and the outermost cross-sectional face of an inwardly mounted cord (c), leaving sufficient space for insertion of substantially perpendicular reinforcement (b), providing means for unification of a predetermined plurality of trusses, and reinforcement elements in longitudinal, lateral, and transverse axis. The phrase "providing means for unification of a predetermined plurality of trusses, and reinforcement elements in longitudinal, lateral, and transverse axis" is regarded to as functional language, and while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Examiner refers Applicant to MPEP §2114. Furthermore, Durand's aperture is capable of performing the functions stated above.

Regarding claim 17, Durand in Figures 4 and 6 discloses an aperture device (d) wherein said cincturing aperture (a) can be provided by rigidly affixing said web element (4, 5) to at least two cords (c, f) by bending and said web element (4, 5) is rigidly affixed to one or more chord (c, f) elements in opposition forming one or more apertures (a) in parallel for insertion of reinforcement elements of an elongated and sinuous nature to span between said apertures interconnecting, and girding, and cincturing said spanning reinforcement to said elongated lattice framework containing a plurality of said cincturing apertures along its span. The phrase "for insertion of reinforcement elements

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of an elongated and sinuous nature to span between said apertures interconnecting, and girding, and cincturing said spanning reinforcement to said elongated lattice framework containing a plurality of said cincturing apertures along its span” is regarded to as functional language, and while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Examiner refers Applicant to MPEP §2114. Furthermore, the apertures are capable of performing the functions stated above.

Regarding claim 18, Durand in Figures 4 and 6 discloses an aperture device (d) wherein a freely locatable aperture cincture element (10) comprised of bent reinforcement provides a means for attachment of structural elements into a composite network of reinforcement or to adjacent structural elements of an assembled framework and for connectivity to prior art components preventing relative movement of said attached elements to achieve higher ductility and transverse composite unification in tension as well as compression. The phrase “provides a means for attachment of structural elements into a composite network of reinforcement or to adjacent structural elements of an assembled framework and for connectivity to prior art components preventing relative movement of said attached elements to achieve higher ductility and transverse composite unification in tension as well as compression” is regarded to as functional language, and while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Examiner refers Applicant to

MPEP §2114. Furthermore, Durand's bent reinforcement is capable of performing the functions stated above.

Claim Rejections - 35 USC § 103

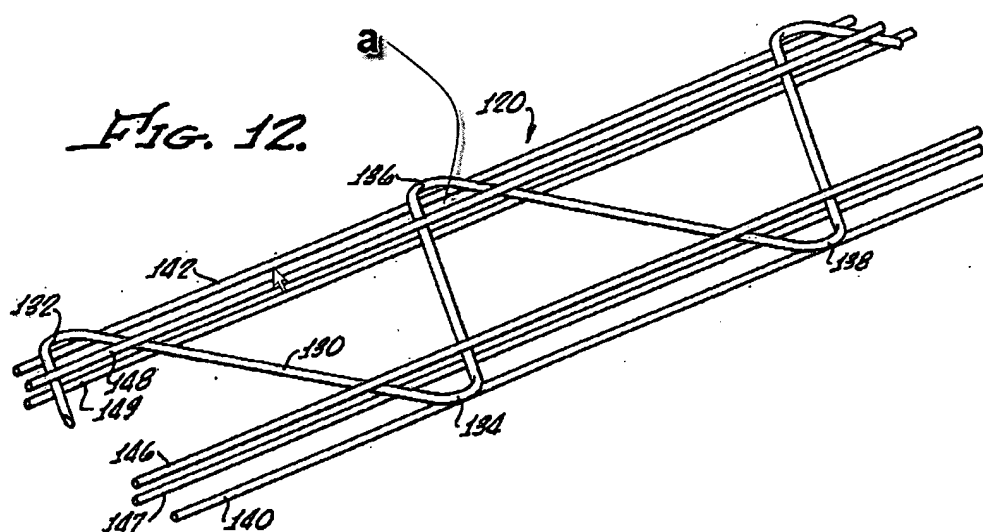
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

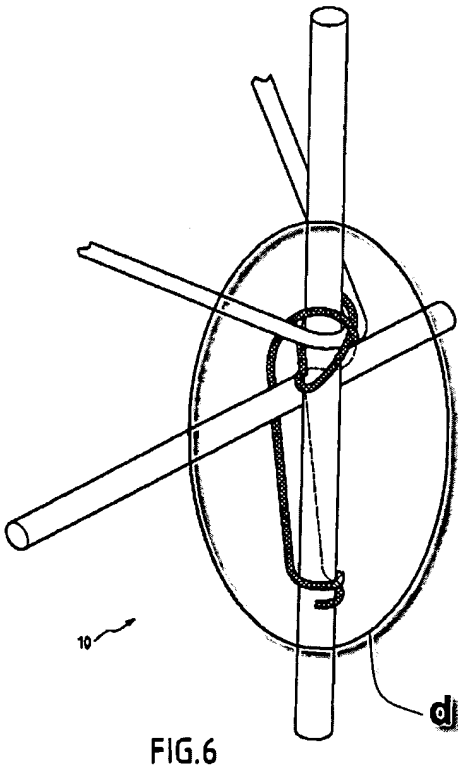
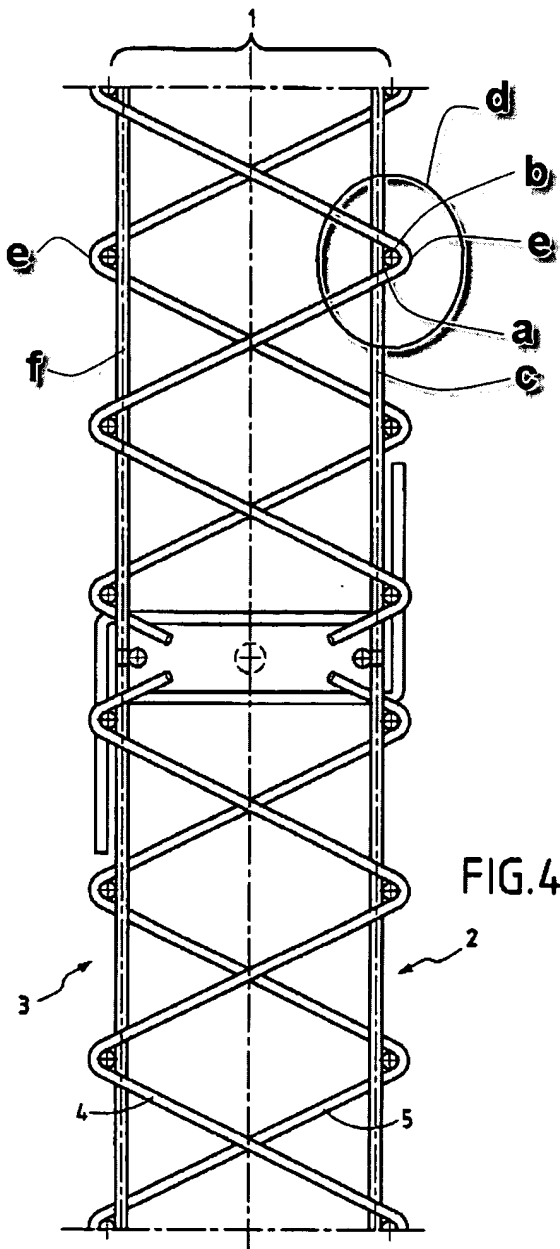
Claims 7 and 13 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Durand ('486 B1) in view of Artzer (U.S. Patent No. 4,336,676).

Regarding claim 7, Durand in Figures 4 and 6 discloses an aperture device (d) as discussed above and further disclose that at least one element (4, 5) is comprised of curvilinear reinforcement elements (4) but does not disclose that the reinforcing elements is of a material of the group consisting of mineral, metal, fiber, or chemical. However, Artzer in Figure 12 discloses an aperture device where at least one element (130) is comprised of curvilinear reinforcement elements that are inherently of metal (Col 9, Ln 58-60). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the device of Durand to include at least one element comprised of curvilinear reinforcement elements of a material of metal as taught by Artzer to provide reinforcement elements that can be welded (Col 9, Ln 58-60).

Regarding claim 13, Durand in Figures 4 and 6 discloses an aperture device as discussed above but does not disclose that structural elements of the family of wood, steel or other materials commonly used in structures can be fitted to act as a cord elements and become incorporated into the composite structure providing a means to develop a stronger bond and shear transfer within the hybrid assemblage of structural elements. However, Artzer in Figure 12 discloses an aperture device where structural elements (120) inherently of the family steel act as cord elements and become incorporated into the composite structure (Col 9, Ln 58-60). Therefore, it would have been obvious to a person having ordinary skill in the arts at the time of the applicant's invention to modify the aperture device of Durand to include structural elements of the family of steel as taught by Artzer to provide reinforcement elements that can be welded (Col 9, Ln 58-60). The phrase "providing a means to develop a stronger bond and shear transfer within the hybrid assemblage of structural elements" is regarded to as functional language, and while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Examiner refers Applicant to MPEP §2114. Furthermore, the steel cord is capable of performing the functions stated above.



Artzer (U.S. Patent No. 4,336,676)



Durand (U.S. Patent No. 6,691,486 B1)

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Paroly (U.S. Patent No. 6,237,297) a modular truss assembly; Rockstead et al. (U.S. Patent No. 4,104,842) a building reinforcement matrix; Chen (U.S. Patent No. 4,611,450) a reinforced panel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine T. Cajilig whose telephone number is (571) 272-8143. The examiner can normally be reached on Monday - Friday from 8am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CTC *CTC*
8/24/06

LANNA MAI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

Lanna Mai